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INJURY TO THE EYE.

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On account of the more highly specialized and delicate structure of the eye, injuries to this organ possess an interest and importance peculiarly their own. Not only is loss of sight of the affected eye itself a possibility, even from apparently the most trivial lesion; but the surgeon's responsibility is increased many fold by the knowledge that in any case of perforation of the outer tunic, blindness may occur in both eyes through sympathetic inflammation.

Infected wounds in any locality are never trivial, as a local lesion may at any time become general; but when these lesions are in the eye there is, in addition , the danger of serious impairment or loss of special function. Then, too. the several structures of which the eye-ball is composed, their resistance to disease, their power of regeneration or their lack of these important qualities, make special study of each respective part a necessity on the part of the surgeon engaged in this work, if the interests of the injured are to be conserved.

In the more severe injuries there is the question of immediate enucleation versus an attempt to save the globe. In any instance there is also the possibility of medico-legal complications which serves to enhance the responsibility and emphasizes the necessity of greater care in the matter of observation and the keeping of accurate records as to vision, tension and other conditions as they may arise.

It is evident that the importance of an injury to the eye-ball depends upon many conditions, as; first, the structure involved;

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second, the extent of the trauma; third, the presence of a foreign body, its nature and the chances of its removal; fourth, the presence of infection and its character. Obviously, in a paper of this kind, one must indulge largely in generalities, and only to illustrate certain conditions, will specific cases be cited. Some one has said that the individual who can do the small things well, is more apt to be or to become able to perform the larger duties. Perhaps nowhere does one see so much carelessness or incompetency as in the removal of small particles from the cornea. And yet nearly everyone, even the laity, considers himself competent to treat these injuries. Considering their frequency and the lack of proper care, serious results are the exception.

In industrial communities the foreign body is often a small particle of iron (so called iron scale), or oxide of iron which strikes the corneal epithelium as a spark. These particles, on account of their intense heat, are sterile when they strike the cornea. If they can be promptly removed with a sterile instrument there is little danger of ulceration, although the eye should be thoroughly cleansed and a bandage applied. By the time these cases are seen by the physician, there is in addtiion to the small black particle, a small brownish area surrounding it (the so-called stain which results from the chemical decomposition of the iron). This again may be surrounded by a white or grayish-white area which shows necrosis of the epithelium, or perhaps the deeper layer. In order to differentiate these areas, good vision on the part of the examiner is necessary. Often the particles are too small to be seen by the unaided eye, much less removed. Here is one of the chief uses of the Berger loupe. The light, preferable day-light, must also be condensed upon the cornea with a lens. By this means the particles can be differentiated from pigments spots on the iris. The importance of this differentiation is illustrated in a certain case related to me by a colleague.

A physician had continued scraping the cornea until he had perforated it in an attempt to remove a pigment spot in the iris, mistaking it for a foreign body in the cornea. If he had possessed good vision and used the binocular magnifier under good illumination, such a castrophy could not have occured.

Another important point is the anesthesia. It is a well known fact that cocaine has a peculiar effect on the corneal epithelium. Repeated instillations cause a drying and exfoliation of the external layers and even the entire thickness of epithelial cells may be separated from Bowman's membrane. This shows the necessity of keeping the eye closed if cocaine is used, or better still, a solution of holocaine may be employed.

A number of instruments have been devised for the removal of foreign bodies from the cornea, but none of them are as useful as the ordinary lid knife of Arlt. This has the proper point and is not too sharp. It is essential to remove the stain which surrounds the particle as well as the foreign body itself without doing any more damage to the deeper layers than necessary, for a cornea which has been repeatedly injured will show, on close examination, numerous opacities which interfere with vision more or less. Much more serious results may follow these injuries, especially the small erosions caused by a scratch from a finger nail or a particle blown into the eye from the ordinary street dust. Infection is almost certain to occur if there is a conjunctivitis or dacryo-cystitis present at the same time.

It is these apparently trivial injuries which, when infected, give rise to that very rapidly destructive keratitis known as serpiginous ulcer. These are recognized as gray or yellowish-gray opacities in the region of the pupiliary area of the cornea. The edges of the disk are more dense and generally more marked in one direction which indicates the advancing edge. All of these ulcers are curable if proper treatment is instituted sufficiently early, before the posterior abscess appears with hypopion and irido-cyclitis.

So rapidly do these ulcers advance and so destructive are they, that one is justified in using the galvano cautery. These cases are hospital cases and require almost constant attention. Rest is secured for the eye by atropine or duboisine. Dilitation of the pupil must be maintained throughout the disease on account of the iritis. The patients should be kept in bed with hourly cleasing with warm boracic acid solution. Hot applications should be maintained for one hour three times daily. Frequently these measures are sufficient to bring about resolution. However, one should not hesitate to use the galvano cautery and the deep injection of the cyanide of mercury. The galvano cautery should be applied at a red heat and over the entire area of ulceration. This area is outlined by the application of flouresine solution. In bad cases I have often cauterized and made the injection of the cyanide of mercury immediately afterward. This is used in the strength of 1 part to 1000 of water. About 8 minims with 4 minims of 4% cocaine solution are injected into the orbit at the site of the external conjunctival cul-de-sac. The needle is passed through the tissue until it strikes the external wall of the orbit. The point is then turned slightly inward to avoid the periosteum. One must be prepared to see in a few hours a marked swelling of the lids.

In some cases the tension of the eye-ball becomes elevated. If this occurs, paracentesis must be made. These injections may be repeated twice in twenty-four hours for three or four days if necessary.

Aseptic wounds of the outer tunic, cornea and sclera, are attended with little disturbance, even if they are perforating, providing the deeper structures are not injured. Unfortunately the vascular tunic is nearly always involved. The average medical man is particularly helpless in dealing with this class of cases. I wish, therefore, to call special attention to certain symptoms which are significant of certain definite pathological changes and upon which a prognosis can often be made.

The vascular tunic includes the iris, ciliary body and the choroid, and is called the uvea. Inasmuch as this tunic covers almost all of the inner surface of the eye-ball, it rarely escapes when there is a perforating wound. The anterior portion of the uveal tract the iris, is nearly always involved in perforating wounds of the cornea. Iridodialysis, radial lacerations, inversions upon the ciliary body are occasionally seen.

Most common and most difficult to treat are the cases of prolapse. On account of its laxity and its suspension in the aqueous humor, the iris flows almost as if it were fluid, when the aqueous seeks to escape through a wound in the cornea. This is less apt to occur if the wound is central. Recent cases of prolapse are recognized by their color and the distortion of the pupil. Most cases appear black from the pigment on the posterior surface. Very soon the iris becomes covered with exudate and granulation tissue and becomes gray. If the iris is simply attached to the posterior corneal wound, it may be treated with atropine and a bandage. If the iris is in the wound it is seldom possible to replace it and not often advisable to attempt it. Within forty-eight hours after the injury, excision of the iris is the proper treatment. After this length of time, adhesions are so firm between the iris and the cornea that excision is almost impossible. In such a case, a pressure bandage, until a flat cicatrix has formed, is the better treatment. The galvano cautery has often been used to destroy these prolapses and cause the formation of a flat cicatrix. It is claimed by Gifford of Omaha, that there is more danger of symphathetic ophthalmia following such cauterizations. He recommends cauterizations with glacial acetic acid; his theory being that the eschar from the galvano cautery affords an entrance for infection, while that from the glacial acetic acid does not. The writer was unfortunate enough to have a case of this kind in private practice.

Until the cause of sympathetic uveitis is positively known, it is well to heed the warnings of authorative writers, and not to use the galvano cautery on the iris in any case.

Omiting those cases in which the eye is lost from corneal ulceration, by far the greatest number are lost from involvement of the ciliary body either from direct injury or by extension. It is of the utmost importance to the surgeon to be able to recognize, clinically, cases of cyclitis and, inasmuch as foreign bodies in the interior of the eye are a prolific cause of cyclitis, I can illustrate some of the symptoms by the following case: Six years ago a lad of twelve years was brought to my office for examination of his eye. With his father he had just arrived from New Jersey the day before. On the train the boy complained of pain in his left eye, and his father had done what he could to relieve him with hot applications. The boy stated that four days before the eye had been red in the morning and had grown gradually worse. His vision was so reduced that he could only count fingers at one foot. Inspection showed a wound in the cornea and iris at the upper nasal quadrant. For a time no history could be obtained from the boy, but he finally admitted that he had struck his eye against the point of a pencil in school, two weeks before. He was put to bed and a trained nurse put in charge. The next day there was exudate in the anterior chamber, at noon it had disappeared; an exudate also could be seen in the vitreous. I advised consultation as I expected an enucleation would be necessary. One of our best known oculists was consulted and, much to my surprise, gave a favorable prognosis. The boy was, therefore, treated as before with atropine, hot applications and dionin; but at the end of two weeks the condition was worse, exudate constant in anterior chamber and eye-ball soft. I advised enucleation and the boy was taken home where an oculist in New York, who was immediately consulted, removed the eye. While the boy was in the hospital after the enucleation of the eye, he confessed to his mother that a neighbor boy had accidentally shot him in the eye. The examination of the enucleated eye disclosed the shot. The boy had kept silent because the fathers of the boys were not on friendly terms and he feared that if the manner of his injury became known, matters would be still further complicated. I speak of this case because it illustrates the type of symptoms which are always significant of degeneration of the eye, and although the history was valueless the clinical findings called for the removal of the eye, although there was no suspicion of the presence of a foreign body.

The average physician thinks that an inflammation of the

ciliary body must be attended by great pain. This is true of the acute variety, but the chronic form may go on to complete atrophy without pain. I should call this case one of sub-acute cyclitis, with exudate into the anterior chamber and into the vitreous chamber. Any surgeon who treats or expects to treat injuries of the eye must know the symptoms of cyclitis. If there is no involvement of the ciliary body, the prognosis is good. If the ciliary body is injured or involved by extension, the prognosis is unfavorable. The subjective symptoms are of little importance except pain and reduction of vision. Pain is present and severe in the acute form and may be entirely absent in the sub-acute and chronic form. Vision is disturbed first in proportion to the involvement of the transparent media. Our chief concern, therefore, is with the objective symptoms. There is always, even in the most chronic cases, some ciliary congestion, and there may be tenderness on pressure. This may be illicited through the lids over the ciliary body. There is always an exudate. Exudates occur in five localities: First, in the ciliary body itself. This is only seen in the laboratory; second, in the anterior chamber either as hypopion or; third, on the posterior surface of the cornea in the form of dots in a triangular form with the base downward and the apex near the pupiliary area. If the precipitates are large they are less regularly arranged; fourth, in the vitreous chamber; fifth, in the posterior chamber, which causes a retraction of the iris with corresponding deepening of the anterior chamber.

Exudate into the ciliary body itself cannot be clinically demonstrated, but may always be found microscopically in eyes which have been enucleated as a possible cause of sympathetic ophthalmia.

Exudates into the anterior and posterior chambers and the corneal precipitates indicate inflammation of the anterior portion of the ciliary body and do not necessarily mean loss of the eye. Exudates into the anterior portion of the vitreous can be seen with lateral illumination as a gray mass behind the lens and indicates inflammation of the posterior portion of the ciliary body, and consequently means a grave prognosis.

The exudate which is seen through the pupil is sometimes mistaken by the inexperienced for cataract. The lens may also be opaque, but even then there is a different color imparted from the depth of the eye. In an injured eye which manifests this symptom with reduction of tension, loss of the eye is inevitable. Enucleation should be performed without waiting for complete loss of perception of light. The surgeon must of course take into consideration that in recent perforating wounds the tension is lowered, as also in

fistula where there is a constant leakage. If too long continued, atropine will sometimes reduce the tension also. These symptoms of cyclitis may occur in perforating wounds with or without retention of foreign bodies. However, as it almost invariably follows, sooner or later, wounds with retained foreign bodies, their early removal is very desirable.

The use of the X-ray for the localization and the giant magnet for the removal of magnetic bodies have made this subject too extensive for consideration in this paper. However, inasmuch as these cases are often seen by the general practitioners and, unfortunately, sometimes not recognized, it may be well to consider some points in the diagnosis and the first aid.

In any case in which a perforating wound can be demonstrated, and the history does not clearly indicate that it was done with a knife or wire or in some similar way, then a retained body should be suspected. Subjective symptoms are of little value. In case of doubt, I would suggest to the general surgeon that he follow that famous advice given by William E. Quine for the treatment of typhoid fever, and use "juditious well sustained and masterly inactivity." Never attempt to probe an eye; never attempt to put a stitch in the sclera. Have an expert in localization as soon as possible. If the foreign body is not magnetic, let it alone until it is very accessible. If it is magnetic, let an expert remove it with the giant magnet.

In conclusion let me repeat: See that your own vision is normal. "First cast out the beam out of thine own eye, and then thou shalt see clearly to cast out the mote which is in thy brother's eye." Use the improved methods for illumination and magnification Treat all wounds asceptically, no matter how trivial. Treat progressive corneal ulcers with the cautery and cyanide of mercury injections. Never cauterize the iris prolapse with the galvano cautery. Frequently examine eyes with perforating wounds for symptoms of cyclitis. When exudate in the vitreous appears with diminishing tension and loss of vision, enucleate as soon as possible.

DISCUSSION.

DR. RICHARD J. TIVNEN, of Chicago: Mr. President and members of the Society, first I wish to thank you for this great privilege of being here and meeting with you and also for the honor of being asked to discuss this paper.

Dr. Woodruff, in Chicago is considered, as many of you know, an authority on the treatment of eye injuries. He has made a special study of this class of cases, and we consider that his word on the subject is in the nature of the final word. This being so, it is rather embarassing for us attempt to to discuss such an entertaining and instructive paper as he has presented to us. However, because of the time limits, the Doctor has not been able to cover or fully develop some of the phases of the subject, as I know he would like to have done, and in fact each particular phase would require

a paper of its own so this provides us with somewhat of an opportunity to add a few words.

One of the most interesting phases of his paper which presents itself to me for the purpose of emphasis is a consideration of that little operation, the removal of foreign bodies from the cornea. We are all more or less prone to consider the removal of foreign bodies in the cornea a very trivial matter indeed, but as Dr. Woodruff has well said, the little things, if well done, will fit one to become more expert in mastering the larger problems. I think this is especially applicable to the consideration of the removal of a foreign body from the cornea.

In considering a foreign body in the cornea it is well to keep in mind the nature and character of the tissue with which we are to deal. The cornea, as the Doctor showed so beautifully in his drawings consists first of the epithelial or outer layer, which provides an almost invulnerable barrier against the inroads of infection. It is the layer which must be considered from a prognostic standpoint. It is the layer also which one must consider in conducting an operating manouvre. The cornea, too, as we know, is rather low in point of nutrition, inasmuch as it contains no blood vessels; it therefore affords a fertile field for the development of infection.

We have also the lymphatic spaces in the cornea. It is well to keep in mind a few facts from a clinical standpoint; namely, that wounds of the cornea in elderly persons present a different outlook from wounds in the cornea of a young person because as age advances the nutrition furnished to the part is redueed and therefore the reparative power of the cornea is lessened.

This reparative and regenerative power of the cornea is lessened also in cases of debilitating illness, where the resistence of the patient is lowered; in these cases a trivial wound, such as we call a foreign body is an entirely different matter from a similar wound received when the patient is in good health and physically strong. We all know that men engaged in this special work, as well as those not so specializing, have great difficulty, many times, in removing these little foreign bodies. Most of this difficulty can be ascribed to a faulty technique. As Dr. Woodruff emphasized good illumination is paramount. Some such instrument as this (binocular loop) should be used; not necessarily, perhaps such an elaborate affair as this, but one that insures a good illumination of the cornea. The next very important point is to make your patient and yourself comfortable. I would say of the two, it is primarily important that the operator himself should be comfortable, because he must, to carry out these delicate manouver and if he occupies a strained position, it adds greatly to the difficulty of the removal.

You will pardon me if I mention the method, which seems to me to be best in the removal of foreign bodies: After cocanizing the eye I should have the patient seated in a comfortable chair with head tilted backward, in an easy position; I should stand behind my patient. Having sterilized my instrument, I have the patient look down; then place my first finger on the margin of the upper lid gently pressing against the sclera and gently pushing the upper lid upward retain it in that position, the finger serving, as a retractor. Retaining the finger in position I then ask the patient to look upward, place the middle finger of the same hand on the lower lid at its margin, press gently against the sclera, push the lid downward thus retracting the lower lid. By proceeding in this manner, one obtains, first a wide separation of the lids, second a limitation of the movement of the eyeabll, and third, eliminates the efforts at spasmodic closing of the lids that the patient usually makes during the operation. In using the Arldt knife that the Doctor has shown us, which to me is an ideal instrument for the purpose, I think an important point is to have a rest for one's hand. Many times we try to poise the knife in mid-air, and approach the eye, without having a resting point for the hand, when we might just as well attain greater steadiness and security by resting the hand on the cheek or on the brow of the patient. In the prognosis of these injuries it is an essential point to consider the location of the injury. It is the experience of most ophthalmologists that a microscopic scar situated centrally on the cornea may interfere very considerably with the vision. We should consider, therefore, in giving a prognosis, first the position of the foreign body; second the extent of the trauma, not only its circumference but its depth, in other words, how far has

it penetrated the corneal layers?.

In the toilet of the wound, after the removal of the foreign body, I believe we should always employ, unless it is an exceedingly trivial injury, a bandage for at least twelve hours. We have seen so many cases of eyes which have gone on from bad to worse simply because the eye had not been given an opportunity to close up and repair the trauma or atrium of infection and place the wound beyond any danger of infection. I would exempt from this routine practice, only cases of trivial injury or those suffering from a purulent or muco-purulent difficulty with the lachrymal apparatus. Lachrymal troubles are very common in people of middle life, and it is important to always investigate the condition of the lachrymnl sac in cases of wounds of the cornea and if a pathological condition be present, it would be bad surgery to apply a bandage, but in nearly all other cases, it is the proper thing to do.

Another thing I wish to speak about is the common practice among workmen engaged in shops and manufacturies of removing these foreign bodies from the eyelids or the eyes of one another. There should be a law to prevent this practice, or if that be impracticable, then at the very least there should be a rule of the shop making it obligatory upon all the workmen to report to the office in all cases of foreign bodies in their eyes. The danger of infection is great where an attempt is made to remove such bodies by a fellow workman, who may employ a horsehair, a dirty toothpick, a match, or a finger covered with oil or even summon to his aid what has been denominated the "vacuum process," in which the tongue is applied to the eye. Such practices have proven many times fatal to the eye so treated, and so it would be well if they be prohibited in some stringent manner from continuing the practice.

As Doctor Woodruff indicated an ulcer frequently follows the trauma and the infection. The Doctor has so well broughtout all the points of the treatment of ulcer that there is very little left to say, but to express concurrence in everything he has enunciated. There might, however, be special emphasis placed upon the use of the galvanic cautery that he has exhibited to us to-day. I believe the cautery to be a very important therapeutic agent in the treatment of ulcers which are not progressing as they should. We know by experience in the use of the cautery in cases of a prolapsed iris, that it is well, as recommended in the Doctor's paper, to heed such men as Dr. Gifford, who advises against the use of the galvano-cautery in such cases. But where we have an ulcer of the cornea which is not progressing as it should, it seems best to use the cautery. I would almost say, if I were limited to the use of any one therapeutic agent, that I would choose the galvano-cautery in preference to any other in the treatment of ulcers of the cornea. That may be considered a strong assertion, but I believe I am justified in saying it, based upon the experience I have had, and the favorable results obtained. We employ the cyanide injection also in many of these ulcer cases. It has been my good fortune to work with Dr. Woodruff and to observe the favorable effects that have resulted from the use of the cyanide injections. The important point in the use of that therapeutic agent, which I know Dr. Woodruff would emphasize, is that it must be used early, for if one waits until the eye has proceeded to a considerable extent on the down grade, it is asking too much to expect favorable results from the use of the injection, although even in such advanced cases, it acts surprisingly well, and I believe with it, we have a most dependable therapeutic agent.

The time will come I am sure, and indeed is almost here, when in the treatment of ulcers of the cornea, the use of the serums will be much more general than at present. In all cases of ulcer it would be well to find out what specific pathogenic bacteria are present and to employ a serum appropriate to the case. The element of rest is most essential in the treatment of corneal ulcer. In a vast majority of such cases, the patients come to our office for treatment, or present themselves at the clinic. I believe that to be absolutely wrong, and that many of these cases should be considered hospital cases and the patients should be put to bed. It is not difficult to estimate from a reparative standpoint the retarding influence of pain, sleeplessness and anxiety that these patients undergo. I should therefore urge rest. Rest in bed, rest of the eyes, and the administration of opiates, if necessary

to induce sleep, combined with proper constitutional measures directed to the regulation of the diet, and the bowels, kidneys, etc..

DR. J. W. MAY: Kansas City, I should like to add my little mite to this discussion although the exhaustive scope of the paper has left little for one to discuss, simply adding a few words by way of emphasis upon some of the points brought out.

By way of illustration concerning what may happen in a case which might be denominated a simple eye injury, I will cite a case which came under my observation not long since. Last November a man presented himself with a slight injury to the cornea. The history given was that he had been struck by a piece of stone in the cornea upon the Saturday previous to the Thursday when I saw him. The piece of stone had been removed by a physician. At the time I saw the patient, the injury was no larger than a pinpoint, but some discharge from the corneal wound indicated the presence of an ulcer. A scraping of it showed the presence of pneumococcus infection. In nine days from that date, the eye was totally destroyed; the ulcer had spread in spite of repeated cauterizations and the employment of every therapeutic remedy I could think of which appeared to be indicated, and had progressed until the cornea was completely involved and perforation had taken place. I feel assured that if I had known of Dr. Woodruff's cyanide of mercury injection, I might have saved that man's eye. I had read of the method, but it escaped my mind at the time this case was presented, and having since seen cases in which this agent has been administered, I am led to believe that the cyanide injection applied at the proper stage of the infection would have saved this eye.

Many times patients come to you with exceedingly dangerous wounds of the eye who do not realize the alarming character of the injury. I was on my way home one day when I was approached by a man who said "I believe I have something in my eye,. I was pulling out a bale of hay and a wire flew up and struck me in the eye." I examined the eye, and found there was a wound in the cornea, with the iris prolapsed. After treatment, this gentleman finally recovered his sight, but was confined to his bed a number of days and the sight of the eye was endangered, and even has not entirely recovered to this day. Another point which I wish to emphasize, and that is that an exceedingly large wound may be sustained by the eye, and recovery eventually take place. Last September a man came to me with a foreign body in his eye, which was by actual measurement eleven-sixteenths of an inch long by a quarter of an inch wide, and was buried in the vitreous. It was a piece of metal from the face of a hammer, and had penetrated through the lower eyelid, through the sclera, and in operating for its removal, I seated him in the chair, made an application of cocain, and when anaesthesized, grasped what I thought was the foreign body, which proved to be the foreign body covered over with choroid. Quite a good deal of the vitreous escaped during the procedure. I found that the piece of metal had a sort of fish-hook projection to it, and on the first attempt, was able to get it about one-fifth of the way out, a little of the vitreous escaping with each pull that I made, and as you know, you cannot lose any vitreous, or at least any quantity of it, without endangering the sight of the eye, or causing complete loss of the eye later. I then pushed the foreign body back into the vitreous, then rotated it in order to get this fish-hook projection in line with the point of entrance and was then able to remove it.

Another point relating to the procedure after the removal of the foreign body which might be of interest. After the removal of the piece of metal I attempted to suture the sclera, using an exceedingly sharp needle. There was a hole in the sclera perhaps six millimeters long, and each time I would make any pressure in my attempt to suture the wound, out would come some more of the vitreous. I quickly desisted; I then pulled the conjunctiva as tight as I could across the wound and sewed it. On an examination of the patient yesterday by Dr. Woodruff, it was ascertained that this man has now 20-20 vision, which is an extremely unusual result where so large a foreign body has been removed.

In conclusion, I want to thank the Doctor for his paper. I am sure we have all been able to receive much benefit from it.

DR. ROBINSON, (of Concordia): The remarks made by the Doctor have called to my mind an important point mentioned in the treatment of corneal ulcers. We know that the pneumococcus is particularly known to cause very bad destruction of the tissue in ulcerative conditions within the eye, and if we could determine beyond question regarding the nature of the infectious bacilli we could handle these cases a great deal better and would be more certain regarding the outcome. I presume this comes rather in the field of the specialist to make these examinations, but it seems to me some investigations as to the nature of these ulcers should be made in laboratory work. We know that in the Morax-Axenfelt bacillus we have a specific form which will respond to the application of zinc very readily without cauterization.

DR. HAYES: Of Seneca, I would like to ask Doctor Woodruff to advise us as to the application of pure carbolic acid or tincture of iodine to an ulcer where the operator does not happen to have a cautery and is not familiar with the use of it for such purposes.

DR. WOODRUFF: (Closing the discussion.) I can agree with the remarks of Dr. Tivenen, in elaborating upon my paper, with the exception of his opening statements. Regarding his remark, that if his choice were to be limited to the use of the one instrument, he would prefer to retain the galvano-cautery, I would say, that fortunately we are not placed in that dilema, and therefore, I have proposed these two methods, the use of cyanide of mercury, and the galvano-cautery. We are limited in the use of the cautery, which is only available in the treatment of anterior ulcers, but we must not lose sight of the fact that we may sometimes be confronted with a posterior abscess. The cautery would have no effect upon that.

Answering the question propounded by the Doctor as to the use of carbolic acid and tincture of iodine, I wish to exhibit to you this little instrument which you have all doubtless seen advertised under the name of Dr. Todd's cautery and which might prove a very valuable instrument for any of you who do not have the galvano-cautery. The little metal ball on this instrument retains the heat, and you simply hold it over the flame of an alcohol lamp. I frequently use carbolic acid and tincture of iodine in certain cases of ulcer of the cornea, but I have been speaking more particularly about the serpiginous ulcer which is almost always due to pnuemococcus infection and is the most virulent ulceration we have in the cornea, and in the treatment of which I would adopt the method which I have suggested, but if the ulceration is due to the presence of some other organism of less virulent character, such as the Morax-Axenfeldt bacillus or influenza bacillus or streptococci and so on, then I might use some tincture of iodine or carbolic acid.

I would just like to say a word regarding the method of closing the wound in the sclera referred to by Dr. May. There has been much valuable suggestion made along the line of the closure of wounds in the eyeball by conjunctival flaps. I do not criticize the Doctor in closing that wound in the way in which he did, and will say that he could not have secured any better results by pursuing any other method, but it sometimes happens that you can slide the conjunctival flap, particularly in extensive wounds of the cornea and keep it covered. Of course we cannot use sutures in the cornea, but we can make a conjunctival flap over the cornea or sclera and get a magnificent result.

I would like to refer again to the action of cocain on the epithelium. I have made mention of the use of holocaine, the virtues of which have been impressed upon me by the experience I have had in its use. If cocain has that action on the corneal epithelium which it does have, and there is a drug that will give us the anaesthesia without hurting the corneal epithelium at all, then we have something that is better than cocain. I believe that holocaine is that drug. It is a derivitive of phenacetine. It is four times as powerful an anaesthetic as cocain and has no more action on the cornea or the ciliary body or iris other than its anaesthetic effect. Furthermore it is bacteriacidal and is of benefit in corneal ulcers, or in cases of inflammation from the presence of foreign bodies, or in infected wounds of the cornea. I believe we have a drug which will supplant cocaine. The only drawback in connection with its use that I know of, is that its action is more irritating

than that of cocaine; it causes some congestion, but I do not believe that is at all sufficient to offset its superiority over cocaine. The holocaine is used in the two per cent solution.

EYES AND EARS OF SCHOOL CHILDREN.

DR. H. B. CAFFEY, Pittsburg, Kansas.

Read before the Southwest Kansas Medical Society, April 11, 1911.

It would seem from the vast amount that had been written upon this subject in recent years that, there remains but little to be said which can be new or original, therefore it is with some trepidation and hesitancy that I enter upon the subject of Medical Inspection or the systematic inspection of school children., but I consider the matter of such great importance to the present day civilization that a recapitulation will not be entirely out of order.

Medical men should continue to pound upon the subject until Health and Educational authorities cause to be issued, an order compelling the examination of the eyes and ears of all school children once during each school year. Inspection of school children has been continued long enough and has become sufficiently widespread to justify some rather sweeping generalizations. No group of children of any considerable size has been examined without finding numerous defects and disabilities serious enough, not only to affect their school work, but to form a real handicap in their after-school efforts to secure a livelihood. The aggregate amount of discomfort and pain experienced by school children is enough to awaken universal sympathy. The hindrances to school advancement and the consequent waste of effort and of money are matters of serious concern, but the ignorance and indifference which lies back of it all are matters of greater moment, and it devolves upon us as guardians of the public health to lift the veil of ignorance and indifference and open wide the eyes of the educators of this state, to the absolute necessity of proper eyes and ears for our school children, if they would be a success, not only as students but in the various walks of life, after leaving the school room. Up to the present time we have not had statistics sufficient to give any real valuable and reliable information, but in a paper before the American School Hygiene Association, Dr. Leonard P. Ayers of the Russell Sage Foundation, after giving the figures and percentages of 23000 school children affected in 15 schools in Manhattan, has this to say, "We have for the first time figures which conclusively demonstrate that there is a real relation between physical defectiveness and school progress.

It is a matter of common observation that the brightest and most studious pupils are afflicted with defective eyesight. There is also a steady increase in defectiveness with the advance of age." This shows that a slight error if allowed to go uncorrected will advance under the strain of constant use such as that to which the real studious will subject their eyes. He also says" The sums of money spent annually in N. Y. City for public education reach high into the millions. It would be a very simple matter to compute how many dollars are wasted each year in the futile attempt to impart instruction to pupils whose mental faculties are dulled through perfectly remedial physical defects.

By school inspection in Massachusetts it was discovered that out of 400,000 children examined, 81000 were defective in vision and 22000 in hearing, to say nothing of the other defects such as adenoids, bad teeth and etc. It is also estimated that there are 20,000,000 school children in the United States and of this number 16,000,000 or about 80% suffer from some eye, ear, nose and throat or throat disease, which can be easily detected and generally cured by early medical attention and which will become chronic or incurable if neglected. Now, we have no figures by which to estimate the percentage of defectives in our Kansas schools but I think you will agree that we should expect an average amount at least of such disabilities among the children of this state.

No argument is necessary to convince those in control of our public schools of the need of systematic annual examination of the eyes and ears of school children, for it is an undisputed fact that healthy eyes and ears are the first essential to the ready requirement of an education. Almost all children are born with healthy eyes and ears and such conditions as myopia, hypermetropia, acute and chronic inflammatory conditions are due to malnutrition neglect or excessive use of the eyes under improper conditions, most of which could be detected and corrected if discovered in its incipiency. Latent errors and even manifest errors of a low degree are not usually detected until the child begins school work, and if they are allowed to continue such work without the proper correction, the refractive error develops at an alarming degree, and only too often irreparable damage is done before the parents are aware that there is anything wrong. I have no doubt that many children have been punished by parents and teachers for failing to "learn a lesson" or to be promoted, when in reality the eyes were entirely to blame. Only a few weeks ago a father brought his son into my office and said he wanted me to tell him if there was anything wrong with the boys eyes, that he

was of the opinion that the boy did not want to go to school, but that as the child had claimed he could not see, he wanted his eyes examined before punishing him. Upon examination I found progressive myopia to a marked degree. **Wise father this,** but we know not how many boys get the punishment before the examination.

We often hear it marvelled at that such a small percentage of our children remain in school and complete the high school course. Would it not be very interesting and instructive to know what percentage of those who fail to complete the course have defective eyesight?

The two principal defects, myopia or near sight and hypermetropia or far sight are very easily detected, and any school teacher can be taught to make the test in ten minutes. The average increase of myopia during school life is 20% and this increase is augmented by study under improper conditions, lack of proper glasses and etc.

The hypermetropic eye renders study exceedingly difficult, producing tired eyes, headache, nervousness and inability to concentrate the thought. All of this is productive of illiteracy, ignorance and idleness and provide scholars that are a burden to their teachers and a disappointment to their parents, and encourage the swelling of the ranks of the idle, the outcast and even the criminal.

Nasal and throat hypertrophies such as enlarged turbinates, adenoids and tonsils, produce deafness in children (some authorities claiming that 90% of deafness in children is due to adenoids), who are unable to absorb ordinary education, and frequently have discharging ears, which not only induce deafness and becomes even a menance to life, but necessitates the production of micro-organisms which should exclude such children from school, owing to the liability of infecting other scholars.

Most parents think nothing of a "gathering in the ear"—they seem to think it a mere incident of childhood, as commonplace as the "running nose" or the "dribbling mouth", and after a few drops of sweet oil, pass the case up without further attention. They expect this to occur every winter, and do not stop to think there must be a cause for such a condition, and if that cause is not removed **that child** will very likely need an ear trumpet before he has reached middle life.

The pity of it all is, that practically all such conditions and many more too numerous to mention could be cared for and cured if detected early in life, and I believe that everyone will agree

that the best time to do this, is when the child enters school and the surest way is to institute systematic examination of all school children.

Up to the present time where-ever this custom has been adopted, the simple examination by school teachers has been the only one to prove successful. and we should certainly favor the adoption of such a method in the schools of Kansas. This can be done, if the Health and Educational authorities will issue separate orders that such examinations shall be made. It is not hard to do, it is not expensive, it is in no way objectionable; and can be easily and effectively accomplished.

To foster child growth in accordance with the laws of his own nature; to treat him as a spiritual entity without sacrificing his physical health; to secure mental attainments through studies which furnish appropriate stimulus to thought; to develop all of the latent forces of body and of mind without unnecessary loss of energy or the arrest or prematurity of development; to condition his school career so that his thinking is quickened and deepened and his vitality augmented—these are some of the elements concerned in the problems of health and education."

It is no disparagement to assert that, when the final history of our time is written, when the relative value of changes and discoveries is estimated rightly, and when the full hopes of the present day efforts are realized, no age will outshine in beneficience the results which are bound to accrue from the union of Health and Education."

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VARICOSE VEINS.

DR. N. C. MORROW, Altamont, Kansas.

Read before the South-east Kansas Medical Society, April 11, 1911.

Varicose veins do not often imperil life, nor do they often cause serious illness; never-the-less they deserve our consideration because of their great frequency and because they often make our patients absolutely miserable, unable to enjoy life or even to perform their accustomed duties.

Embryologically, the veins are derived from the same structure as the arteries, the mesoblast, and histologically, are identical with them. They differ from the arteries only in the relative thickness of the various coats, and in the presence of valves in the superficial and some of the deep veins. The intima is identical with that of the arteries and is continous with them through

the capillaries. This is of considerable importance because the behavior of this coat in the process of repair and regeneration is the same as that of the arteries under the conditions of disease or injury. Also the tendency to thrombosis and embolism is the same whenever the endothelium is injured or irritated. In the superficial veins, especially of the lower extremities, and in some of the deep veins, the intima is reduplicated to form valves.

The media is composed of elastic tissue and involuntary muscle fibres, both of which, however, are very much less abundant than in the arteries. The adventitia is composed almost entirely of white fibrous tissue.

Owing to the thinness of the muscular coat other veins lack that rotundity, elasticity, and contractibility which is so characteristic of the arteries; and they possess the power of a considerable, though limited, distention which never occurs in normal arteries. The total capacity of the venous system is several times greater than that of the arterial. In spite of the thinness of their walls, the veins are relatively as strong as the arteries.

The valves support the blood mechanically, and while they are competent to resist the normal backflow, they are unable to withstand any long, continued pressure which is greater than the normal intravenous tension. This point is of great importance in the formation of varices.

The collateral circulation of the venous system is very free, even more so than that of the arterial, and it is a fact that gangrene very rarely if ever occurs as a result of obstruction of the veins alone.

In considering the cause of varicose veins we must keep in mind always their structure and their function. In the lower extremities the thin-walled dilatable vein must support a column of blood between three and four feet in height. The saphenous veins have practically no external support, and the contractions of the muscles, when they effect the blood flow at all, tend to hinder rather than to hasten it. The valves, as we have already seen, are comparatively frail and unable to withstand any extra strain for any considerable length of time. Not infrequently they are congenitally deficient.

Long continued increase of pressure by forcing the valves may lead to chronic degeneration changes, which destroy the elasticity of the veins and cause a compensatory phlebosclerosis. Or the phlebosclerosis may be the primary rather than the secondary cause. Among the contributory causes the most important are those which cause an increased venous pressure; occupations

that require the standing position; increased intra-abdominal pressure from whatever cause; arterio-sclerosis, which probably acts by exciting a phlebosclerosis, as well as by causing increased pressure, and pregnancy, which has an influence outside of the mere mechanical factor of increasing intra-abdominal pressure. Other causes are nervous diseases which affect vaso-motor control, and chronic phlebitis which causes structural changes in the walls of the veins.

The histological changes, as in arteriosclerosis, are primarily and essentially in the media. There is at first marked hypertrophy of the muscular and elastic elements, which is later followed by atrophy. The walls may be ultimately transformed into fibrous, inelastic tubes which are tortuous and sacculated and adherent to the surrounding structures. The fibrous degeneration extends to the adventitia and intima. The valves become atrophied to mere stumps and in places the proliferation of the intima is so great that the lumen of the vessel is entirely obliterated. The effect of the phlebosclerosis is to lengthen the vein so that it becomes tortuous. Large tortuous veins frequently come in contact with each other and by pressure atrophy becomes perforated and communicate with each other.

The common complications of varicose veins are; 1 rupture, 2 phlebitis and lymphangitis, 3 neuralgia, 4 ulcer. Rupture of the thinned varices if external may cause hemorrhage so profuse as to threaten life, if subcutaneous large ecchymoses or hæmatomata are produced. Phlebitis may be excited by the most trifling injury because of the stagnation of the circulation and the degenerated condition of the walls of the vein. Lymphagitis frequently accompanies phlebitis and adds greatly to the severity of the condition.

Neuralgias are often found with varicose veins and are caused by the development of intraneural and perineural varices. An operation for the relief of this form of neuralgia has been devised, which consist in exposing the nerves, dissecting out all recognizable varices and combing the nerve with a coarse brush to destroy all small varices. It is said to have given good results.

By far the most frequent and most important complication is ulcer. It is commonly found on the lower and inner aspect of the leg over or near to the internal saphenous. The skin over the varices, at first thin and hardened, later becomes hypertrophic and oedematous and an easy prey to the slightest infection. And when infection once occurs, healing is very slow.

Let us now consider the treatment of this condition. There

are of course certain cases where radical operation is contra-indicated, because of various constitutional disease—nephritis, cardiac insufficiency, diabetes, etc. It is also contra-indicated in cases which have very extensive involvement of the skin, so that operation would require the excision of agreat amount of skin; and in cases in which the deep veins also are varicosed or have been obliterated by a previous thrombo-phlebitis. In all these cases the proper care of the limbs combined with a suitable form of external support, will afford no little relief to the patient. We have seen that increased intra-venous tension is the chief cause of this condition, so it is important to do away with any condition that tends to increase tension. Occupations that require standing for long periods are to be avoided, garters or other constricting garments must be discarded, but our main reliance is to be put in properly fitted elastic stockings. They must always be made to extend from the foot to a point above the enlarged veins. They are to be fitted after the foot had been elevated for some time, so that all swelling is gone from the leg.

The only curative treatment for this condition, however, is operative. The results of operative procedures in these cases, if properly performed, are most satisfactory and the mortality should be practically nothing. Of course there is some danger of embolism, but the emboli are non-septic and are of minor significance. All operations for this condition may be divided into four classes: 1. Ligature of the varicose trunks; 2. linear section of the varicose trunks by circumferential or spiral incisions; 3. subcutaneous resection of the affected veins; 4 open resection of the veins and their tributaries. They all aim to the destruction of the diseased and incompetent venous trunk, and the forcing of the blood through the deeper veins.

Obviously if the deeper veins are varicosed or obliterated the operation will be a failure. The first class of operations, ligature of the varicosed trunk, are palliative rather than curative and are to be used where more extensive operations are contra-indicated. One or more ligatures are placed along the course of the vein through small transverse incisions. The operation is done under local anesthesia, and in some cases gives most gratifying results.

The second class, linear section of the vein and its tributarries by circumferential or spiral incision aims to destroy the continuity of all the affected veins. However, it is found that the percentage of cures from this operation is small. Moreover, division of the cutaneous nerves leads to paræsthesias and because of the destruction of the lymphatics the œdema persists in the foot.

The third class, subcutaneous resection has been best developed by Charles Mayo. He uses an instrument called an enucleator, which consists of a fourth inch(¼) steel ring set on a long handle. The vein being exposed by a short transverse incision and cut between ligatures the end to be removed is threaded through the enucleator; then by a gentle pushing force, the vein being held to make tension, the instrument is forced down along the vein six or eight inches tearing off the lateral branches as it goes. The point of the instrument is then forced against the skin and a small incision made down to it, when the ring is pushed through the opening. The loop of vein thus freed is removed from the wound and from the instrument; the instrument is removed from the wound and rethreaded on the vein and the process repeated till as much of the vein as desired has been removed.

The fourth class, open resection, is to be used when, because of extreme tortuosity, calcareous deposits, or extensive adhesions to surrounding tissues the subcutaneous method is impractical. Any length of vein deemed necessary may be removed by this method. The great objection to it being the extensive and unsightly scars that are left.

Varicose ulcers are most unsatisfactory to treat unless the veins are removed at the same time. But they can usually be easily cured at the time the varicosed veins are removed. The entire ulcer should be excised and the denuded area covered with skin-grafts. The grafts may then be left exposed to air, according to Mayo's method, or they may be covered with a heavy gauze dressing which is not disturbed for several days, till the grafts have taken. The latter method gives the best results provided a clean operation has been done.

In conclusion, let me say that every patient suffering with varicose veins should be submitted to operation if possible. Palliative measures are unsatisfactory at best; while radical operative procedures, if judiciously chosen and skillfully done, give the most gratifying results.

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DIAGNOSIS AND TREATMENT OF GASTRIC ULCER.

DR. P. T. BOHAN, Kansas City, Mo.

Read before the South-east Kansas Medical Society, April, 11, 1911.

Ulcer of the stomach or duodenum is a vastly more common condition than we have been led to suppose. Combined statistics from over 5000 autopsies shows ulcer or scars from healed ulcer

in a little over 4% of cases, yet ulcer is diagnosticated clinically in less than half this number, which can mean only one of two things—either ulcer is often latent, or what is more probable, our methods of diagnosis are faulty. Codman states it as his conviction that a peptic ulcer is almost as frequent as acute appendicitis. Statistics from the operating room by such men as Deaver, Monyhan, and the Mayo's prove conclusively that many cases thought to be some form of nervous dyspepsia by the gastroenterologists have an organic background in the form of an ulcer of the stomach or duodenum.

Not only the occasional death that occurs from hemorrhage or perforation and the possibility of malignant degeneration, but the serious consequences of the numerous complications, such as starvation due to pyloric stenosis or perigastric adhesions, tuberculosis from malnutrition and anæmia and the various neuroses from the chronic source of irritation, justifies a more careful consideration of the symptom complex of ulcer than it has been given in the past.

According to statistics, 25% of the cases where ulcers or scars are found at autopsy, the patient had had no symptoms during life. We also read reports of cases where the first ulcer symptom was hemorrhage or perforation. I do not believe that many cases of ulcer are latent. I have seen a few cases of perforation and of hemorrhage in patients that had never consulted a physician for stomach trouble and at first denied ever having had more than a few dyspeptic symptoms, but a careful history never failed to elicit fairly typical ulcer symptoms.

Diagnosis.—There are three cardinal signs of ulcer, viz., hyperchlorhydria, hemorrhage and pain.

Hyperchlorhydria.—This is present in only about ⅓ of the cases. As neurosis reflex nervous dyspepsia, especially in appendicitis and gall-stones, constipation and many other conditions cause an excess of hydrochloric acid, it cannot be considered a very valuable sign of ulcer. It is not so much the excess of the acid as its presence that is of diagnostic value. Although reliable authorities claim that ulcer may be present with anacidity, the cases are extremely rare. With the symptom complex of ulcer and no free hydrochloric acid, I would so strongly suspect malignancy that I would urge an immediate operation.

Hemmorrhage.—About 25% of ulcer cases vomit blood. Occult blood is found in the stools in about 70% of cases. The clinical test for occult blood is so delicate (one mg. of blood to one gm. of stool giving the reaction) and the source of the blood may-

be any place between the nose and the rectum that this test, even when positive, does'nt mean very much.

Pain.—If only 70% of ulcer cases have the unreliable sign of occult blood in the stools, if only 25% have hematemesis, and if only 35% have hyperchlorhydria, it is very evident in order to diagnose more than ½ of the cases that we have to rely on some other symptom. According to Linden, 90% of ulcer cases have pain. In 265 cases analyzed by Fenwich pain was present in 100 %. From my experience I must agree with the latter authority. I have never yet seen a case that I thought was ulcer that did not give a history of pain, nor have I ever seen a patient with perforation or hemorrhage due to ulcer, from whom a history of pain could not be obtained. From a diagnostic standpoint it is of no material difference whether there are sensory nerves in the floor of the ulcer or not, or whether the pain is due to spasm of the muscular wall of the antrum pyloricum or a lymphangitis in the peritoneum, the practical fact remains that the pain occurs when hydrochloric acid is free in the gastric juice and subsides when the acid is neutralized by alkalies or is combined with albuminous food. The characteristic pain of ulcer is burning, gnawing, grinding, or cutting in character. It may radiate toward the nipples the left hypochondrium or left scapula, but very seldom to the right shoulder or right scapula. Although the character of the pain and the region to which it radiates are of extreme importance, more important still is the time that it occurs. Most patients are free from pain in the morning before breakfast. The pain comes on 15 minutes to two hours after breakfast and lasts until after the stomach empties itself. It may come on again a while before the midday meal on account of hunger or the thoughts of food exciting the secretion of hydrochloric acid, and this hunger pain is rightly considered by some to be almost pathognomonic of ulcer. This hunger pain is relieved for a time by the midday meal, but recurs again in the afternoon, usually more severe than in the forenoon, probably due to a heavier meal being eaten at noon than in the morning. Probably the most characteristic ulcer pain is the pain that comes on at night. When a patient frequently gets out of bed during the middle of the night and takes a dose of soda or a glass of milk to relieve a gnawing sensation in the stomach. it is a most valuable symptom of ulcer. Monyhan makes a diagnosis of ulcer from this one symptom alone. Pain is usually worse when standing or walking about than when lying down and is sometimes worse when lying on the right side than on the left. Vomiting always relieves the burning pain of ulcer, but seldom

the pain due to cholecystitis. Pain may be aggravated by eating rough vegetables or acid fruits, but this is not a symptom of much value.

Very few patients when left to tell their own story will give a typical ulcer history. To them the fullness, heaviness, weight and belching that are only symptoms of the hydrochloric acid irritating the mucous membrane are more important than the little gnawing hunger pain, which to us means so much. It is only by a careful analysis of the history, which in some cases may take an hour or two, and by picking out little fragments of importance from a mass of confused and disconnected statements, that we are able to build up an ulcer symptom complex. Second in importance to the subjective symptom of pain, are the points of localized tenderness, The point of tenderness in front is fairly constant, distinctly localized about the size of a nickel or a quarter, and situated about two inches below the ziphoid cartilage either in the median line or a little to the left. On the left side behind about an inch from the spine, and between the ninth and twelfth dorsal vertebræ, is another area of tenderness which is of about the same diagnostic value as the tenderness in front.

Other symptoms that are sometimes present and of the same diagnostic value, if associated with the typical history of pain are vomiting, anæmia, good appetite, heartburn, and constipation. Without the history of pain I would never diagnose an ulcer, but with the typical pain and localized points of tenderness and the presence of free hydrochloric acid, I would diagnose an ulcer if all other symptoms were absent.

Differential Diagnosis.—So many conditions cause stomach symptoms or pain in the epigastrium that a number of things have to be considered in the differential diagnosis. The history of a patient with nervous dyspepsia may so closely simulate that of ulcer that the diagnosis is most difficult, and at times, in order to be on the safe side, it may be necessary to give the patient the ulcer treatment for a week or two as a therapeutic test. The commonest symptoms in nervous dyspepsia is the belching of gas, not only immediately after eating, but sometimes while eating. When a patient complains of nothing but belching of gas, the chances are that the trouble is a nervous dyspepsia, it certainly is not ulcer. Some neurotics have hyperchlorhydria, which may cause a fullness, heartburn, and discomfort in the stomach at the height of digestion, but they don't have the pain. Monyhan states unqualifiedly that persistent hyperchlorhydria is peptic ulcer.

Gall-stone colic may be confused with the neuralgic pains of ulcer. The main features of the pain in biliary colic are its sudden outset, agonizing character, and its periodicity. More confusing perhaps is the pain due to stone in the cystic duct, or cholecystitis and pericholecystitis. In these conditions, the pain is constant, either uninfluenced or aggravated by eating and situatted in the right hypochondrium, while the pain due to ulcer is seldom ever felt on the right side.

Cancer.—The age of the patient, the anorexia, the stomach analysis, the signs of motor insufficiency, make the diagnosis easy in most cases. Chronic appendicitis with reflex appendiceal dyspepsia may closely simulate the ulcer syndrome, but usually one can get a history of acute onset, a little tenderness over the appendix, or a slight increase in the leucocytes. Again these two affections may coexist.

Patterson states in the January 14th, number of the Lancet that in ⅔ of the cases in which he had operated for gastric or duodenal ulcer, he also found a diseased appendix.

The diagnosis of the complications of ulcer often depends upon eliciting a previous ulcer syndrome. The most serious complication and the one upon which a life may depend upon an early diagnosis is that of perforation. The history of the following case is typical of this condition.

In Nov. 1910, I was called at 11 p. m., to see Mr. W. who was attending a convention at the Coates House, and was suddenly siezed with severe pain in the abdomen. I saw him about ten minutes after the outset of his illness and found him in bed with his legs flexed, abdomen retracted and rigid, and a pinched expression. A couple of minutes after I arrived he vomited a considerable quantity of undigested material that had a very marked alcoholic oder, but it contained no blood. He was complaining of severe pain in the right hypochondrium and loin. The patient stated that he had drunk twelve to fifteen high-balls and smoked about the same number of strong cigars during the day, and was just as sure that his trouble was an attack of acute indigestion as I was that it was not. He insisted that he had never had stomach symptoms of any kind that could not be accounted for by indiscretions in diet or alcoholic-excesses. He finally told me that for five years, he would get out of bed once or twice a week in the middle of the night and take some soda, and that he occasionally had a little burning and gnawing sensation in his stomach between meals. From this history, from the sudden outset of pain in the epigastrium with collapse, and the obliteration of the liver dull-

ness a positive diagnosis of perforated ulcer was made and an immediate operation advised. Four hours from the outset of his illness the patient was operated upon by Dr. Perkins and a perforated ulcer on the anterior wall of the pyloric antrum was found. Except for a rather severe hemorrhage ten days after the operation, the patient made an uninterrupted recovery. Whenever a patient who has had even suspicious ulcer symptoms is suddenly seized with severe pain in the epigastrium or either hypochondrium and the abdominal muscles are rigid, the leucocytus slightly increased and even though the liver dullness is intact, the tempera ture normal or subnormal, a probable diagnosis of perforated ulcer should be made and the patient operated upon at once.

To wait for positive symptoms of peritonitis before making a diagnosis means a frightfully high mortality, while if the operation is done within six hours, the mortality ought not to exceed 20%.

Perigastric adhesions are found in five per cent of autopsies and are on the commonest complications of ulcer. The diagnosis of adhesions is not easy and depends upon the history of ulcer symptoms, and constant pain in the epigastrium, that is aggravated by movements of the body, such as bending backwards, elevating the arms to the head, and stooping. Pariser has called attention to pain on elevating the left costal arch as a sign of adhesions, and I have found this to be a symptom of considerable value.

Stenosis of the pyloris due to scar tissue or inflammatory exudate is diagnosed by the symptoms of motor insufficiency, such as peristaltic waves, dilated stomach, retention of food overnight, and increased acidity and sarcinæ in the stomach contents.

Spasm of the pylorus due to ulcer may cause pain, peristaltic waves and retention, but these symptoms subside if the patient is given the proper diet.

Treatment.—There are few conditions with which the internist has to deal that yields so beautifully to scientific treatment as that of peptic ulcer. To undertake the principle on which the dietetic and medicinal is based it is necessary to bear in mind that the only place in the gastro-intestinal tract from the pharynx to the rectum where a round ulcer forms, is between the lower end of the esophagus and the middle portion of the duodenum, i. e., that portion that comes in contact with the gastric juice. We know that ulcer is extremely rare. if it ever occurs when there is no free hydrochloric acid in the gastric juice. Matthes prevented healing of a traumatic gastric ulcer in a dog by irrigation with a 5% solution of hydrochloric acid. From the fact that ul-

cer occurs only where acid gastric juice flows, that it seldom if ever occurs in anacidity, and that a traumatic ulcer can be prevented from healing by irrigation with a fluid that contains little more free acid than normal gastric juice, suggests strongly to my mind that the main factor in preventing an ulcer from healing is the hydrochloric acid. I have seen at autopsy a number of small round ulcers in the stomach and duodenum when death occurred ten days after a poisonous dose of hydrochloric acid.

Is gastric ulcer a surgical affection? Some surgeons claim that ulcer of the stomach or duodenum is as much a surgical disease as acute appendicitis, less radical ones advise medicinal treatment for the acute ulcers and gastro-enterostomy for the chronic ones. Ulcers heal following gastro-enterostomy because the gastric juice is drained away from the site of the ulcer, but the operation alone does not lessen the secretion of the hydrochloric acid, nor cure the morbid condition of the mucous membrane, the main factors in the causation of ulcer. My personal opinion is that all cases of uncomplicated ulcer, whether acute or chronic, will heal on the proper internal treatment if carried out long enough. An ulcer the size of a dollar on the surface of the body will not completely heal in three weeks, so why should we expect one of the same size in the stomach to do so. If we can prevent free hydrochloric acid in the gastric juice by binding it with albuminous food, neutralizing it with alkalies, and lessening its secretion with belladona, why should'nt these ulcers heal? They will!

Cruveilhier, the pioneer in the study of gastric ulcer, was the first to advocate treatment of the condition by the rest cure and an exclusive milk diet. This stood as the standard until Von Leube introduced his method in 1884. It is essentially as follows;

1. Absolute rest in bed for 2 or 3 weeks.
2. Hot flaxseed poultices on the epigastrium.
3. Bismuth medication.
4. Diet, which consists for the first week or ten days of milk, usually boiled, Leube meat solution, and unsweetened zweiback. The next week or ten days in addition to the milk, he gives rice, soup, and eggs. Later, tender meats; and after the fifth week careful ordinary dieting.

Leube has reported up to the present time 627 cases. He claim that 90% were cured, 85% improved, 1% failed to improve, and ½% died. In cases with hemorrhages, Leube advises "abstinence cure" for a few days, and during this time dependence is placed on rectal feeding. It seems to be pretty well proven by the experiment of Edsall and Miller in this country, and Body

and Robertston in England, that it is doubtful if more than a minute quantity of actual nourishment is absorbed from the rectum. Ewald, who was formerly very enthusiastic over nutrient enemata, now says their only value is in supplying the body with liquid. Schutz, of Vienna, has found nutrient enemata to increase the secretion of gastric juice, a condition to be avoided in the treatment of gastric ulcer.

I am not enthusiastic over rectal feeding in any condition, and certainly would never use it in the treatment of ulcer. In 1904 Leuhartz came forward with his treatment, which with slight modifications, I have found the most satisfactory. His objections to Leubes treatment were the starvation in the early period on the rectal feeding and later the large quantities of milk. The reasons given by Leuhartz for all ulcers not healing without treatment are: 1. The acid in the gastric juice; 2. Mechanical stretching from over distention; 3. Anæmia. The essentials of the Leuhartz's treatment for ulcer are as follows: the patient is kept in bed from 3 to 5 weeks. Most of the time an icebag is kept on the epigastrium to prevent distention of the stomach. The first day the diet consists of one egg stirred in three ounces of milk, and of this mixture the patient sips a tablespoonful every two hours. He adds 3 ounces of milk and one egg daily until the patient is taking 8 eggs and one quart of milk a day. After the first few days, ½ to 1 ounce of sugar is added to the milk, and in the second week scraped raw meat. At the end of two weeks, rice, milk toast, and mashed potatoes are given. Among the benefits of the cure, Leuhartz specially cites: 1. The short duration of treatment; 2. by means of dieting alone the pain was relieved; 3. The vomiting ceased in a few days; 4. The recurrent hemorrhages were for less than by other modes of treatment; 5. The cures are usually permanent.

In cases of hemorrhage feeding is begun by the mouth at once in order to bind the hydrochloric acid and prevent its evil effects on the recent thrombus. Bold as this treatment may seem, statistics and personal experience would indicate that the percentage of cases with recurrent hemorrhage is much less when fed by the mouth, according to Leuhartz, than if given rectal feeding, as advised by Leube.

Of the medicinal remedies used for ulcer, the most important are alkalies, which neutralize the acidity. I usually give seven grains of sodium bicarbonate and three and one half grains of calcined magnesia five times a day, fifteen minutes after taking nourishment. Bismuth is a popular remedy, and Fleiner recom-

mends giving it in large doses through the stomach tube. When used on an ulcer on the surface of the body, it forms a dry, adherent crust, and it has been demonstrated at autopsy to do the same thing on a gastric ulcer, which would naturally interfere with the healing process. Bismuth may be given for a few days for pain, but should not be given to promote healing of the ulcer, because it probably lessens it.

Silver nitrate lessens the hyperæsthesia of the mucous membrane of the stomach, but it increases the acid, and probably has little or no effect in stimulating granulations.

Paul Cohnheim recommends one ounce of olive oil 3 times a day before taking nourishment. He claims that it soothes and protects the ulcer, lessens the secretion of acid, and possesses considerable caloric value. I have used olive oil in the treatment of ulcer a number of times, and the results lead me to believe that the claims for it by Cohnheim are correct. Probably the most brilliant results are obtained from it in cases where the ulcer is close to the pyloric ring and causes pyloric spasm, which is manifested by peristaltic waves.

Surgical Indications.—Such complications of ulcer as adhesions, perforation or cicatricial stenosis of the pyloris are postitive indications for surgery. Hemorrhage is not. Deaver stopped operating for gastric hemorrhage four or five years ago. If given a hypodermic injection of morphine and an ice bag placed on the abdomen, few patients will bleed to death, if operated upon, the mortality is high, and the bleeding vessel is seldom found.

That all cases of acute ulcer are medical, is the concensus of opinion of both medical men and surgeons; whether all cases of chronic ulcer are surgical is a mooted question.

The results following gastro-enterostomy are sufficiently satisfactory to justify the operation, if patients prefer that method of treatment. But unless combined with the medical treatment, recurrence will be greater than after the medical treatment alone.

Before advising operation on these cases, it should be remembered that gastro-enterostomy by the most skillful surgeons in this country, has a legitimate mortality of about 2%. By the average surgeon, who does not exceed one half dozen of these operations in a year, the mortality is at least 10%.

In 627 cases given the medical treatment by Leube, the mortality was one half per cent.

The cases of chronic uncomplicated ulcer that can't be cured by the Leuhartz diet if given properly and carriedout long enough are extremely few—I have never seen any.

In obscure cases I have used the Leuhartz diet to test the diagnosis. If most of the symptoms have not subsided at the end of two weeks, I feel sure that the diagnosis is wrong, or there is some complication. Twice in the last six months, because the symptoms were not relieved at the end of two weeks, I suspected complication and advised operation, and found that one case was complicated by appendicitis and the other by perigastric adhesions.

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POST-OPERATIVE THROMBOSIS AND NEURITIS.
With Report of Case.

ST. CLOUD COOPER, M. D., Fort Smith, Arkansas.

Read before the South-west Medical Association, Oct. 11, 1910.

Any-post-operative trouble after a successful laparotomy is a worry to the surgeon.

Thrombosis of the veins of the lower extremities is met with often enough as a post-operative complication after gynecological operations as to merit our attention and to cause us to look about for means and methods to prevent it.

G. B. Miller in his article on Complications Following Operations in Kelly-Noble Gynecology and Abdominal Surgery says:

"Schenck states that after 7130 gynecological operations in the Johns Hopkins Hospital there occurred 48 cases of thrombosis of the veins of the lower extremities.

"Hoffmier reports 6 cases following 389 operations for myoma.

"Albanus found that in 1140 laparotomies in the New General Hospital at Hamburg-Eppendorf there occurred 53 cases.

"Sonnenburg in 1000 operations for appendicitis observed 20 cases.

"Clark in 3000 celiotomies performed mainly for gynecologic diseases found 35 cases of femoral thrombosis."

Thrombosis while a troublesome complication, is not always a serious one. There is always a possibility of every thrombus becoming an embolus, and for this reason every case of thrombo sis should be handled with extreme care.

It is said to be most likely to occur between the 10 and 20th day. Debilitated and anæmic subjects and those who have suffered from prolonged uterine hemorrhages due to submucous fibroids are the ones most likely to suffer from this complication after operation. Bland-Sutton believes that sepsis is the sole cause of the formation of the thrombi in the great veins and that thrombosis is in reality a defensive action of the blood. He in-

sists on the most painstaking care in preparation of the ligature material and the use of sterilized rubber gloves over thoroughly washed hands in all pelvic operations.

The proper observance of the surgeon of the normal conditions within the abdomen and a striving to create them as far as possible by his operations, is a safeguard against the possibility of thrombosis. We are told that as long as a blood clot forming in the broad ligament after pelvic operations remain sterile, there is no cause for trouble; but becoming infected they cause thrombosis.

Symptoms.—Pain in the calf of the leg. The leg becomes swollen. The infected vessels stand out like whipcords. Numbness and tingling in foot and toes. Pain is usually so great that morphine is demanded for its relief. The limb becomes cold and white.

In a patient whose physical condition is bad from exhausting disease and loss of blood from uterine myoma it is well to get that patient in as good condition as possible before operation.

During the operation work as rapidly as possible; save as much blood as possible; handle the viscera as little as possible, and depart as little as possible from physiological conditions within the abdomen and at the same time maintaining the body warmth.

After operation the hearts action should be watched and not allowed to grow weak. Elevating the foot of the bed so as to equalize the circulation and to empty the pelvic veins. Fowlers position favors pelvic stasis and if the heart is weak there is slowing of the pelvic circulation, thereby favoring the formation of a thrombus.

Patients position in bed should be frequently changed.

Introduction of fluids into the body by mouth, rectum or subcutaneously.

Sitting up or straining on the bed pan should not be allowed until suitable time has elapsed after operation.

The treatment is rest in bed for at least six weeks, She should be moved as little as possible. No active purgation. Limb wrapped in cotton and kept warm by hot water bags. Foot elevated. after two months gentle massage, electricity and hydrotherapeutic methods.

Report of the Case.—Mrs. B. aged 37 years. Family history unimportant. At the age of eight had inflammatory rheumatism and at twelve had a severe attack of typhoid fever. Was thin and anæmic during childhood. Began to mensturate at sixteen; menstruation lasts for three or four days without pain or discom-

fort out of the ordinary. She is the mother of two children, the youngest now nine years old. Four years ago began to have attacks of diarrhoea which lasted off and on for two years. For the past eighteen months has had but little trouble with bowels. For several years has had hypochlorhydria, for which she has been taking hydrochloric acid after meals.

Present Status.—March 10, 1910, is weak and anæmic. Slightest exertion tires and causes shortness of breath. Has headaches and vertigo. Skin has a pale chalky white appearance. Has a well marked mitral murmur. Lungs negative. Urine negative. Blood examination shows secondary anæmia. For the past three months has suffered from frequent uterine hemorrhages. Lately there has been a bad odor from the uterine discharges. Uterus is enlarged with a depth of five inches. Sloughing submucous fibroid protruding from cervical opening. A number of small fibroid tumors can be made out on posterior and anterior uterine body. She has had a good deal of pelvic pain and does not sleep well. Is nervous and apprehensive.

She was given treatment to build up her general health and on April 3, 1910, entered Sparks Memorial Hospital for operation. Under ether anesthesia a supra-vaginal amputation of the uterus was done. Tubes and ovaries being healthy were left. She was under the anesthetic forty-five minutes. Pulse at beginning of operation 120 and at its conclusion 140. She was put to bed, head elevated and Murphy hot rectal installation started. Pulse continuing weak the head was lowered and strychnia given. She had very little nausea and spent a very good night. After noon of second day complained of distension of upper abdomen and nausea; the stomach was washed out after withdrawing considerable fluid and two ounces of hot olive oil left in the stomach. After this she was quite comfortable and had a good night. Bowels moved during the night. On the fourth afternoon had severe attack of palpitation of the heart which was relieved by a small dose of morphia and digitalis.

On the night of the sixth day she was allowed by the nurse, to hang her left foot over the side of the bed for several minutes, when she awoke she had a severe pain in calf of leg, in the foot and in the popliteal space. The leg was numb and she complained of a burning and tingling sensation in foot and toes.

The pain was so severe she was given morphine for its relief. Leg was wrapped in cotton and hot water bottles applied. Next day on looking at the leg large blisters had formed on the heel, ball of great toe and on outer planter surface near little toe.

Still complained of pain and numbness of foot and leg. Sensation of foot gone. No swelling of foot or leg. Motion of toes gone.

On third day of onset of this trouble she began to have great pain along the course of the sciatic nerve for which she was given deep injections of alcohol in the nerve. This was repeated for several days following, with relief to this particular pain.

She required a daily dose of morphine for the pain in leg and foot. At the beginning of this complication she had a degree or so of evening temperature which continued for about three weeks. The foot remained colder than its fellow but not swollen. By the end of a month the blisters had dried up and when removed their sites showed distinct loss of substance. About this time she had another severe attack of pain followed by blisters at the same places as before; they ran the same aseptic course with further loss of tissue. On deep pressure on the inner and outer side of the leg there could be felt hardened veins or nerves, which caused pain and tingling in the foot when touched.

The pain and numb feeling gradually grew less, the motion and sensation in the toes gradually returned. Five months after the onset of these symptoms she still has some pain and numbness of the foot but is up and going about. Has gained in strength, weighs more than she ever did before.

I am satisfied that I had a neuritis as well as a thrombosis to deal with in this case.

The woman weakened by uterine hemorrhages, with diseased heart and bad digestion was one who would be likely to suffer from thrombosis after a pelvic operation.

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ANKYLOSTOMIASIS.

Uncinariasis, Hook-Worm Disease, Miners Anaemia, Egyptian Chlorosis.

DR. F. W. TRETBAR, Stafford, Kansas.

Read before the Stafford County Medical Society, April 20, 1911.

This disease is the Hook-worm invasion of the small intestine of man.

History.—In 1843 Dubini first described the Hook-worm in man. It was demonstrated in connection with Egyptian Chlorosis. Sandwith states it is mentioned by the Egyptian writers between 3000 and 4000 years ago. It was described in Tunnel workers at St. Gothards and was recognized more or less from this time on.

Incidence.—The parasite is spread in Tropical and Subtropical Countries and is one of the most fatal of all parasitic diseases. In Porto Rico in 1903 among a total of 23,433 deaths, 5,736 were from anæmia, practically all due to Hook-worm. It was not until the Spanish-American war that the interest in the disease was aroused in the United States.

Reports of cases were published in 1901 and 1902, and in 1902 Dr. Stiles took up the study and demonstrated the fact that the disease was endemic in many places, and was the cause of the common anæmia in the Southern States. It has been found to some extent among the miners of Pennsylvania, in the Phillipines, Germany and Austra-Hungary. During 1903, 3,000 patients were treated in the Bochum hospital for ankylostomiasis. In England among the Cornish miners, the anæmia is due to ankylostoma. In Egypt it is very prevalent.

Parasite.—The worm is a strangylus, closely related to the sclerastoma causing verminous aneurism and colic in the horse, and to the gapeworm of fowls. There are two forms causing disease in man, Old World ankylostoma duodenalo and the New World uncinaria Americana, described by Stiles. The parasites have the same general characteristics; the male measure from 7 to 11mm. in length and the female 10 to 18 mm.

The American worm is the larger. The mouth is provided with heavy sharp teeth with which they pierce the mucosa of the bowel, and by means of a strong muscular oesophagus suck the blood. The eggs are about 65 by 38 microns in the American and somewhat smaller in the European. They are laid in segmentation, forming very characteristic bodies in the faeces. The embryo lives in water or moist ground. The larvæ may live for months in the mud and water of mines. It may be taken in with the water or from the dirt on the hands of the miners, or in the soil deliberately eaten by the earth eaters, of the South. The embryo may enter the skin and be carried by the blood stream.

The adult worm lives in the small intestine, chiefly in the jejunum, but may be found in the duodenum or colon, rarely in the stomach.

Symptoms.—Constant drain on system by sucking of blood; loss of blood into bowel through the bites. A large number however must be present to cause symptoms. Several writers group these cases into mild, medium and severe. At beginning of stage of incubation there may be gastrointestinal irritation and perhaps fever. In advanced stages the anæmia is the most marked symptom. The skin is dirty, muddy at times waxy. In

the South it is known as the "Florida Complexion." There is a lack of lustre in the eyes and a dull expression. Children are stunted and ill developed. As the anæmia advances, the spleen and liver also enlarge, and there is an effusion into the abdomen, so that there is a pot bellied condition. Oedema of the feet is not uncommon. There is usually palpitation of the heart, cardiac bruits and shortness of breath.

Diagnosis.—This is very simple, examine the stools after the use of thymol. Stiles states that the bloting paper test is very good where a microscopical test cannot be made. A portion of fæces placed on white bloting paper leaves a red stain suggestive of blood, after standing an hour.

Prophylaxis.—Prophylaxis of this disease consists of the enforcing of all our sanitary and hygiene laws. And especially those pertaining to the destruction of the worm and egg, by using antiseptics. Also properly constructed outhouses, so that flies, mosquitoes and other insects may not become infection carriers. Infection is most common in summer, most prevalent among whites. Miners should be examined, and their closet accomodations in their mines should be increased and brought to a higher standard of perfection. This later suggestion has been followed in the mines of Austria-Hungary with a marked increased earning ability per man.

Prognosis.—Is good except in advanced cases of anæmia.

Treatment. This consists of preliminary dieting or starving for a few days. Then give one half ounce epsom salt at bed time, repeat this in the morning, followed in two hours with one dram of thymol in capsules. After waiting two hours another half ounce epsom salt is given.

Some reccommend one dram of thymol in 24 hours, taken in whiskey. In debilitated persons smaller doses may be given over a longer period of time.

Report of a Case of Hook-Worm.—Mr. C. R., white; American, was born Sept. 2, 1891, near Greenville, Tenn.

Family History.—Father died of tuberculosis at 52-3 years was sick 5 or 6 months.

Fathers' father died of senility.

Fathers' mother died at 76 years, probably senility.

Mother was 31 or 32 years of age at death, tuberculosis cause.

Mothers' father died at age 76, probably senility.

Mothers' mother died at age of 65 or 70 years probably senility.

Personal History.—Is not of any unusual consequence. Has had pertussis, mumps and la grippe. Early in life he says he

had sores on the neck, which afterward ruptured and discharged. He says the Doctor called this scrofula which is probably correct. He has two brothers and two sisters living and well. One infant sister died of diphtheria.

Symptoms. Patient complains of severe weakness, and extreme exhaustion on the slightest exertion, shortness of breath especially after ascending a flight of stairs. His appetite is fairly good somewhat changeable, sleeps about 14 to 16 hours every day. He says he has been feeling poorly for four or five years, gradually getting worse.

He has constant tenderness over epigastrium, at times painful. The urine seems about normal in amount and quality. Nothing abnormal was found with stomach or liver. Feet legs and abdomen are oedematous. In the beginning I thought I could elicit some symptoms of fluid in the peritoneal cavity. The evening temperature for the last two weeks averaged about 100 degrees Farenheit, the average pulse about 96. The heart area of dullness is enlarged, and have a regurgtation of the left auriculoventricular valve.

Diagnosis.—Owing to the fact that several of his ancestors died of tuberculosis, first of all might arise in ones mind the thought of that disease. On this account I used the tuberculine ointment test, which with the other clinical findings proved negative. Next the history of his southern origin and the very unsanitary existence in that part of the South, led me to make a diagnosis of anæmia probably caused by the hook-worm.

Treatment. This consisted of doing without supper, two tablespoonfuls of epsom salt, at bed time. For breakfast two more tablespoon fuls of salts. At 10 a. m., twenty grains of thymol in capsule with plenty of water. At 12 a. m., twenty grains of thymol followed in two hours with another large dose of salts. At 4:00 p. m., he received the last dose of twenty grains of thymol and this was again followed in two hours with a large dose of salts. The last dose of salts being vomited was followed in two hours more with one tablespoonful of salts.

Findings.—The first three quarts of fecal matter revealed nothing of a definite nature. The last two quarts, after being filtered through a thin white cloth showed many worms.

Treatment for the anæmia, pepto mangan (Gude') one dram in a glass of milk four times daily. For the heart digitalis and strophanthus in tablet form, and laxatives as needed, also as much fresh air and sunshine as possible with a moderate amount of daily exercise.

THE JOURNAL
OF THE
Kansas Medical Society.

JAMES W. MAY, - - - - EDITOR.

ASSOCIATE EDITORS: J. E. SAWTELL, CHAS. S. HUFFMAN, O. P. DAVIS.

Subscription Rates: $2.00 per year, 20c single copy. Advertising rates furnished promptly on application.

The Journal was established in June, 1901, by a publication committee at Topeka. In May, 1903, Dr. G. H. Hoxie was elected editor and served four years. In January, 1904, it incorporated the Wichita Medical Journal, owned by Drs. W. H. Graves and G. K. Purvis, and the Western Medical Journal, owned by Dr. A. J. Roberts, of Ft, Scott. In March, 1908, it incorporated the Wyandotte County Medical Journal, owned by Dr. James W. May. It is now printed in Kansas City, Kansas, and appears the first of every month. Correspondence should be addressed to the editor. Editorial office, 501-2 Husted Bldg., Kansas City, Kans.

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EDITORIAL

It is two per cent genius and ninety-eight per cent honest effort that brings about success in any line of work.—Thomas A. Edison.

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Those who are constantly lamenting their ill luck are often, in some way or other, reaping the consequences of their own neglect, mismanagement improvidence or want of application.—Marshall Field.

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One criticism might be offered some of the authors of papers and that is no one should have his name printed on the program who has not sent in the title of his address. It would seem that since the program does not appear until a week or ten days before the meeting everyone who is to present a paper has it written at that time and it is simply negligence that the secretary is not notified.

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Our President.—J. T. Axtell was born near Galesburgh, Illinois, and graduated at the Garnett high school, Garnett, Kansas. He spent two years in the medical department of the University of Michigan, and practiced at Hunnewell, Kansas, under the state board law in force at that time, graduated from Bellevue Hospital Medical College of New York City in 1883, and has practiced medicine constantly in Newton every since. In 1886 he spent six months in the post graduate schools in New York City and Phila-

delphia, and in February, 1887, established the Axtell Hospital at Newton, Kansas, which has since that time been under his charge. For eight years he held the position of Professor of Orthopedic Surgery in the college of Physicians and Surgeons in Kansas City, Kansas. For the last fifteen years his practice has been limited to surgery and consultation.

Dr. Axtell is an enthusiastic alfalfa raiser and a lover of fine stock, especially fine horses, of which he always has a herd. He has always been prominent in the public affairs of his town and county. He is well known among the profession of the State and is held in high esteem. He has always stood for everything that is best in the practice of medicine and his election as president is a fitting honor rounding out a successful career.

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The annual meeting of the Society just held at Kansas City was fully up to expectations. While the attendance was not up to the mark established at the last meeting held in Kansas City the meeting in other respects were better. The scientific program was of exceptional interest partly owing to the fact that three guests, two from St. Louis and one from Chicago delivered addresses on topics of great interest. Dr. Wm. Engleback presented the subject "The Diagnosis of Chest Diseases" and illustrated his talk with lantern slides. Dr. H. W. Woodruff presented the subject "Injuries to the Eye," supplemented with drawings of great merit. Dr. Bransford Lewis presented the subject "The Modern Cystoscope" and demonstrated its use. Dr. O. P. Davis delivered the President's Address his subject being "The Physical Supervision of the School Child." His address was well received and showed much care in its preparation and a thorough knowledge of the subject. The meeting place, Masonic Temple, could not be improved upon, and our thanks are due the Scottish Rites Bodies for allowing us its use. The invitation of Hutchinson to hold the meeting there in 1912 was accepted: The following officers were elected: President, Dr. J. T. Axtell, Newton; 1st Vice-President, Dr. H. G. Welsh, Hutchinson; 2nd Vice-President, Dr. G. M. Gray, Kansas City; 3rd Vice-President, Dr. G. W. Anderson, Beverley; Secretary, Dr. Chas. S. Huffman, Columbus; Treasurer, Dr. L. H. Munn, Topeka; Delegates to A. M. A., Dr. O. P. Davis, Topeka, 2 years; Dr. M. Trueheart, Sterling, 1 year.; Councillors: Fourth Dist, Dr. W. E. McVey, Topeka; Fifth District, Dr. W. E. Currie, Sterling; Ninth District, Dr. C. S. Kenney, Norton.

Public Health and Medical Legislation.—The attitude of the last Legislature toward Public Health and Medical Legislation was such as to warrant the conclusion that the Medical Profession of this State will have to get into politics if they are to have just recognition along side the commercial interests of the State.

In the opening week of the Legislature the House declared an emergency and voted $3,000 for hog cholera serum, for it was said that there were a number of sick hogs at various places throughout the state that needed immediate attention or they might die. Yet, the budget of the State Board of Health, which is working in the interest of the welfare of the "folks" was cut $19,200 from the amount asked; and which was actually necessary in order to carry forward the work with efficiency and expedition. An appeal for an increase in our emergency fund, in order that the State Board of Health might provide the various serums and antitoxin treatment for certain infectious diseases, and might continue the investigation of infantile paralysis, and be ready to cope with the Asiatic Cholera, which is now threatening both sea coasts of the country, was of no avail. Not only there was no emergency declared, but our prayers were unheeded.

It appeared that every bill of Public Health or Medical character was bitterly opposed in the House, and most of such bills defeated; the only exception being that of the Bill for a State Tuberculosis Sanatorium. The amount appropriated for this institution however was so small as to build and equip a mere pretext of an institution as compared with such as the State really needs.

The appropriation for the Division of Foods and Drugs was cut to such an extent as will seriously cripple the work for the coming two years. And this notwithstanding the fact that the Department stood ready to prove to any unbiased committee that through this division of the Board's work they are saving to the consumers of the State something over $1,000,000 annually.

The appropriation for the Medical Department of the University was stricken from the budget and there was considerable talk heard about the State House that the entire school should be abolished.

Christian Scientists and their sympathizers, as well as champions of Osteopathy and Chiropractors, seem to have a strong hold upon the Legislature. Indeed it is said that one of the strong men on the Ways and Means Committee of the House was of Christian Science faith; and it is but natural to expect that he would be opposed to legislation of this character.

Aside from the Tuberculosis Sanatorium Bill, the only other

Bill that was passed, in which the State Board of Health was interested, was the Standard Registration of Vital Statistics Act. But here again the enemies of Medical Legislation got in their work and the Bill was so mutilated in the Senate, and the appropriation for making it effective was so crippled in the House, as to make it impossible of enforcement; so, in all likelihood, there will be no Vital Statistics Law during the present Biennium.

Bills providing for a Summer School for Health Officers at the University was defeated, and the bill fixing the remuneration for Health Officers was likewise slaughtered.

There were three bills passed by the Legislature providing for hospital treatment, at the University Hospital, for certain classes of patients; but it is problematical whether these bills can be made effective under the present Hospital facilities of the University Medical School.

Amendments to the Medical Practice Act, and the State Pharmacy Law suffered defeat and a Bill calculated to emasculate the Food and Drugs Act came very near of passage.

All of the above facts are ample to again warrant the observation that the Pbysicians of Kansas will have to organize themselves and get into politics if they are to come to their own.

S. J. CRUMBINE.

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NOTES OF THE STATE MEETING.

The attendance, while not up to the standard set at the last meeting in Kansas City was good. Two hundred and thirty members signed the registration book.

The President's Address on "The Physical Supervision of the School Child" was of a great deal of interest. It will appear in full in the June issue.

The committee provided more automobiles than there were visiting ladies to occupy them. The ride was over the boulevards and it seemingly made a hit with the ladies.

The banquet was held on Thursday evening at the Masonic Temple and as for responses to the toasts has not been excelled. Toasts were responded to by Dr. M. L. Perry, Dr. C. C. Goddard, Dr. Bransford Lewis, Hon. Henry Dean and Senator Hodges.

A stenographer was employed to take down the discussions and it will again be attempted to publish them. However, after listening to the way in which many of the members almost whispered their remarks it does not look very promising.

The invitation of Hutchinson to hold the next meeting there was accepted. With ample hotel facilities Hutchinson can take care of the meeting as well as any city in the state.

The proceedings of the House of Delegates will appear in full in the June issue.

Dr. H. W. Woodruff and Dr. R. J. Tivnen of Chicago, held an eye clinic at Bethany Hospital on Friday. The cases operated upon were three cases of the tucking operation for strabismus, one tear sac extirpation for chronic dacryocystitis, and one Hotz operation for entropion.

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SOCIETY NOTES.

The Missouri State Medical Society held its annual meeting at Kansas City, May 16-18.

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The Wyandotte Medical Society held its last meeting before the summer vacation May 23rd.

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Golden Belt Physicians Meet.—At the annual meeting of the Golden Belt Medical Society, held in Salina, April 6, Dr. Leonard S. Steadman, Junction City, was elected president, Dr. R. C. Lowman, Kansas City, vice-president; Dr. L. O. Nordstrom, Salina, secretary; and Dr. John W. Neptune, Salina, treasurer. Dr. John G. Sheldon Kansas City, Mo., conducted a surgical clinic for the society at St. Barnabas Hospital.

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The South East Kansas Medical Society met at Independence, April 11th. About sixty doctors registered, and an exceptionally good program was given. "Appendicitis from a Practical Standpoint," by Dr. William F, Coon, Caney; "Syphilis as Seen and Treated by the General Practitioner," by Dr. G. A. Blasdel, Garnett; "Varicose Veins" Dr. N. C. Morrow, Altamont; "Septic Endometritis, with Report of a Case," Dr. H. H. Brookhart, Scammon; "Vital Statistics," Dr. E. C. Wickersham, Independence; "Arteriosclerosis, with some Suggestions for Prophylaxis," Dr. C. A. Thomas, Edna; "Eyes and Ears of School Children," Dr. Hugh B. Caffey, Pittsburg; "Diagnosis and Treatment of Gastric Ulcer," Dr. P. T. Bohan Kansas City, Mo.; Short talks were given by Drs. C. L. Smith and W. C. Chaney, of Independence. The visitors were entertained by an automoblie ride, and a banquet following the program. The

officers for the ensuing year are: President, Dr. G. A. Blasdel, of Garnett; secretary, Dr. E. A. Miner, of Independence; treasurer, Dr. M. F. Jarrett, of Fort Scott. The next meeting will be held in Parsons.

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The Labette County Society met for their regualr monthly session in Dr. Bennett's office in Mound Valley. A number of interesting clinical cases were shown, one of severe burns of the hands and arms being especially interesting. Dr. Henson, of Mound Valley, read a paper on "Burns," drawing on an extensive clinical experience for his material. Dr. Christman, of Parsons, had charge of the discussion for the evening, the subject being "Surgery of the Spine." Following the program the Mound Valley doctors entertained the society at a banquet.

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Below will be found the program for the Summer School of Health Officers and Physicians to be held at the University of Kansas at Lawrence, during the week beginning Monday., June 12th. This School will be open to any local physician in the State as well as Health Officers and the Secretary of the State Board of Health, Dr. S. J. Crumbine, extends a cordial invitation to all to attend.

Monday, June 12—4 P. M., Registration of Health Officers and Physicians;, Frazier Hall, University of Kansas, Lawrence.; 4:30 P. M., Annual Meeting of State Board of Health and County and Municipal Health Officers; 8 P. M., Formal opening Summer School for Health Officers, by the Chancellor, Dr. Frank Strong; Address, by Dr. Merwin T. Sudler, Dean University School of Medicine: "The Relation of the School of Medicine to Public Health Work".

Tuesday, June 13—9 to 11 A. M. Bacteriology—Conference: "Microbes." by Dr. W. K. Trimble, Director. Demonstrations: Culture Media—Preparation, clarification, filtration, sterilization, neutralization, etc. Bouillon. Gelatine—Special Media. Agar. Morphology—Microscopic specimens. Cocci, Bacilli, Spirilli, etc., Capsules, Spores, Flagella, etc. 11 to 12 A. M. Chemistry of Water Examinations: Professor E. H. S. Bailey, Director. The Therapeutic Action of Mineral Waters. Conference: "Nature's Nitrogen Cycle." Determination of nitrogen as "Albuminoid" and "Free" ammonia.

1:30 to 2:30 P. M. Public Health Lecture, by Clay W. Coburn, M. D., President State Board of Health. "Preventative Medicine." 2:30 to 5 P. M. Laboratory Exercises: Each student performing himself the matter of the morning's conference and aided by the entire laboratory staff. (Optional.)

5 P. M. Public Health Lecture, by Dr. J. J. Sippy, Secretary State Association of Public Health Officers. "The Health Officer's Duty to secure the Prompt and Implicit Obedience of Every Member of His Community to the Provisions of the Public Health Laws." 8 P. M. Public Health Lecture, illustrated. Clarence E. McClung, Ph. D., Professor of Zoology. "Heredity."

Wednesday, June 14—9 to 11 A. M. Bacteriology. Conference. "Microbic Properties and Products." Professor F. H. Billings, Director. Demonstration: Cultures, Use of loops, straight wire, etc. Inoculation: stab, slant, streak. Growth: aerobic and anaerobic—gas or acid made, etc. Colonies: selection, identification methods, etc. Isolation of a specific germ from mixed growths. 11 to 12 A. M.—Chemistry of Water Examinations, by Professor E. H. S. Bailey, Director. Conference: The Chemical Sanitary Examination of Potable Waters. Demonstrations: Professors C. C. Young. Determination of Nitrites, Nitrates, Chlorine and Oxygen Consumption. 1:30 to 2:30 P. M.—Public Health Lecture. S. J. Crumbine, M. D., Secretary of State Board of Health. 'Prompt and Efficient Quarantine; How to Establish and How to Release from a Quarantine." 2:30 to 5 P. M.—Laboratory Exercises: Each student performing himself the matter of the morning's conference and aided by the entire laboratory staff. (Optional). 5 P. M.—Public Health Lecture, by W. J. V. Deacon, Statistician, State Board of Health: "Public Health Laws." 8 P. M.—Public Health Lecture, illustrated, by S. J. Crumbine, M. D., Secretary, State Board of Health: "The Pittsburg Survey." A study of the Sanitary, Social and Industrial Conditions of the Worlds Greatest Industrial Center.

Thursday, June 15 —9 to 11 A. M. Bacteriology—Conference. "Pathogenic Functions of Microbes and Factors which Influence their Action." Professor W. K. Trimble, Director. Demonstrations: Special methods of determination and diagnosis utilized in Bacteriology. Hanging Drop; Motility; Clumping, Widal Test; Pfeiffer's reaction; Idol Test; Fermentation studies. 11—12 A. M.—Bacteriology of Water and Milk Examinations: Professor F. H. Billings, Director. Conference: "The Role of Bacteria in Water and Milk." Totals at 20 and 37 degrees. Acid counts at 37 degrees. Identification of fecal organisms. 1:30 to 2:30 P. M.—Public Health Lecture. Professor Wm. C. Hoad, C. E., Sanitary Engineer State Board of Health. "The Safe Disposal of Excreta and Wastes."

2:30 to 5 P. M.—Conference on Drug Adulterations. Professors, Sayre, Havenhill and Watson. Laboratory demonstrations and

lecture upon adulterated, sophisticated and deteriorated drugs and pharmaceuticals. 5 P. M.—Public Health Lecture. W. J. V. Deacon, Statistician, State Board of Health. "Importance and Utilization of Vital Statistics in Modern Civilization." 8 P. M.—Annual Meeting of the Kansas Association of Public Health Officers.

Friday, June 16.—9 to 11 A. M.—Bacteriology. Conference. "Classification of Microbes; Variability of Form and Function; A typical Bacteria." Professor W. K. Trimble, Director. Demonstrations: Stains—Utilization for identification and for differentiation, double staining Polychromes. Specific stains for Spores, Capsules, Flagella, etc. 11 to 12 A. M.—Chemistry of Water Examinations. Professor E. H. S. Bailey, Director. Demonstrations: Professor C. C. Young. The Quality of some City Water Supplies of Kansas. 2:30 to 5 P. M.—Conference on Food Adulteration. Professors Bailey and Jackson, Food Analysts for State Board of Health. Demonstrations in Food Laboratories of Food Adulteration and Sophistication. 5 P. M.—Public Health Lecture. S. J. Crumbine, M. D., Secretary State Board of Health. "Queries and Answers on Public Health Laws, Rules and Regulations and the General Duties of the Public Health Official." Quiz. 8 P. M.—Public Health Lecture. Illustrated. Professor Samuel J. Hunter, Professor of Entomology. "Insect Carriers of Disease."

Saturday, June 17.—9 to 11 A. M.—Bacteriology. Professor W. K. Trimble, Director. Conference. "Vaccination, Serotherapy Immunization, Bacterial Vaccines." Dr. Vernor Nisbet, Director of American Biological Company. Demonstrations. Cultures for Toxin Products, Extraction of Toxins. Preparation and use of killed cultures. Preparation and use of filtered Toxins. Preparation and use of Antitoxin Sera. Preparation and use of precipitated antitoxins. Laboratories open for the completion of individual work throughout the day.

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NEWS NOTES

The Journal of the A. M. A. published an interesting issue April 8th, for those interested in automobiles. It contains many valuable suggestions for those who are contemplating making a purchase.

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The next regular meeting of the Kansas State Board of Medical Registration and Examination will be held in Mansas City, Kansas, June 13th, 1911.

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For Sale.—Five room cottage, dispensing medicine and drugs,

also dispensing outfit and cabinet. Must change climate on account of wife's health. Practice about $3,000 per year. Collections 95 per cent. $1,000 buys the above, practice included. Will stay and introduce purchaser. Address NX, care of Journal.

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Dr. Benjamin P. Smith, Miltonvale, has succeeded Dr. Chilton W. McLaughlin, Kansas City, as national medical director of the Sons and Daughters of Justice.

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New Hospital for Kansas City, Kansas.—The campaign to raise $200,000 for the new Bethany Hospital to be built on Mount Olivet, Kansas City, was started April 2. The territory included in this campaign consists of all of Kansas and all of Missouri south of the Missouri river, comprising the St. Louis conference district of the Methodist Episcopal Church.

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Honors for Dr. Welch.—Dr. William H. Welch, of Baltimore, professor of pathology at Johns Hopkins University, has been honored by Emperor William of Germany, who has conferred upon him the Crown Order of the Second Class. It is to be delivered in person by the German Ambassador at Washington. Dr. Welch's honors already are many. He has received the degree of Doctor of Medicine from five universities, four of which were German, the honorary degree also being bestowed upon him by the University of Pennsylvania, and six universities and colleges, including Yale and Harvard, have given him the degree of Doctor of Laws.
—New York Medical Journal.

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Opposes Contract Practice.—Shawnee County Medical Society, at its April meeting, adopted an amendment providing for the expulsion of any member of the society proved to have engaged in lodge or club practice.

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James A. Patton, the Chicago millionaire, has given $2,000,000 to fight tuberculosis. He has begun a personal campaign of social service, the keynote of which is the donation of $2,000,000 within the last six months for charities and public works which partcularly appeal to him. He has set about financing the biggest war on disease that has ever been known. With an initial gift of $500,000 to Northwestern University for medical research into the prevention and cure of tuberculosis, it was learned April 12 that this sum is to be increased at once to $2,000,000, so greatly is Mr. Patten interested in the subject.—Medical Fortnightly.

Robert Koch.—The career of Robert Koch as the discover of the tubercle bacillus is described by S. A. Knopf, New York (Journal A. M. A., May 6), in a eulogistic paper. After a lapse of nearly thirty years since the memorable discovery Knopf says that we can statistically prove beyond the shadow of a doubt that, thanks to the rational, practical yet simple method of prophylaxis which soon followed the discovery of the bacillus of tuberculosis by Robert Koch, the mortality from tuberculosis has been on a steady decrease in nearly all civilized countries. While Koch is generally conceded to have been rather premature in his announcement of the value of tuberculin in the cure of the disease, his original claim has been justified by time and to-day his tuberculin has proved to be a valuable curative in the hands of careful clinicians. His conclusions as to the rarity of the transmission of bovine tuberculosis Knopf thinks were also a little too sweeping. His paper ends with a personal tribute to the character of Robert Koch.

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Special Party Returning from California.—A number of those who will attend the meeting of the A. M. A. in Los Angeles in June have expressed a desire to take their return trip through Victoria and Vancouver, and enjoy the scenery of the Canadian Rockies, with short stop-overs at Banff and other notable resorts. For the accommodation of these, the undersigned is making up a party, leaving Los Angeles on Saturday, July 1, stopping at Santa Barbara, San Francisco, Portland, and Seattle, with a daylight boat ride across the sound to Vancouver. From this point the homeward trip will be over the Canadian Pacific Railway through some of the most gorgeous scenery to be found in the world. Stopovers at Rochester, Minn., to visit the Mayo clinic, will be arranged for those who may desire. For full information and itinerary, address Dr. Charles Wood Fassett, secretary, Medical Society of the Missouri Valley, St. Joseph, Mo.

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Dr. H. R. St. John, formerly of Alton, Kansas, left May 5th, for Vienna. He will spend two years abroad studying.

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It is announced that the public health service at Washington, is about to begin an extended study of goitre to learn the cause of epidemics of the disease now existing in various parts of the country. Dr. John Sundwell, of Chicago, now doing research work at Johns Hopkins University, has been engaged to conduct the investigation.

The Salt Lake route presents one of the most pleasant itineraries, for those who are contemplating attending the meeting of the American Medical Association, at Los Angeles, this year. You can take the U. P. at Kansas City, or any point in Kansas, and then take the D. & R. G., passing over the most picturesque route in America. It seems to us that the accomodations offered by the Salt Lake route have many advantages over the other roads. Anyone desiring information as to this route can obtain the same by writing to the General Passenger Agent of the U. P. R. R. Kansas City.

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Obituary.

George M. Covert, M. D., University, of Louisville, Ky., 1873; local surgeon for the Missouri Pacific Railway at Arkansas City, Kansas, and one of the directors of the Arkansas City Hospital, died at his home, April 22, aged 70.

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Thomas Hamill, M. D., Eclectic Medical Institute, Cincinnati, 1855; Humboldt Medical College, St. Louis, 1867; Missouri Medical College, St. Louis, 1868; acting assistant surgeon in the army during the civil war; for twenty years a member of the board of pension examiners of Johnson County, Kansas, died at his home in Olathe., March 18, aged 85.

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Warren W. Bowles (license, Kansas, 1901); for thirty-five years a practitioner of Bunker Hill, was killed in a runaway accident near Luray, April 5, aged 71.

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William Hannah Austin, M. D., Rush Medical College, 1869; for forty years a practitioner of Abilene, Kan.; a surgeon of volunteers during the Civil War; died at his home in Long Beach, Cal., Dec. 22, 1910, from cerebral hemorrhage, aged 73.

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Lee R. Ashley, M. D., University Medical College of Kansas City, Mo., 1897; a member of the Kansas Medical Society; died at his home in Pleasanton, February 8, from typhoid fever, aged 38.

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Case Reports.

Sodium Cacodylate.—L. W. Crigler, New York, (Journal A. M. A., March 25), reports a case of tertiary syphilis with specially malignant symptoms, including a repidly progressive ulceration of the

eyelid. Ordinary specific treatment failing to cause immediate improvement, the patient was put on daily injections of sodium cacodylate, grain ¾ to a dose. Within forty-eight hours there was marked improvement, the ulcer which had threatened the destruction of the eyelid becoming smooth and healthy in appearance, and within a week the lid had entirely healed with very little deformity. With the exception of two or three of the larger foci situated on subcutaneous bone surfaces near the skin and elbow, there was rapid cicatrization and healing of the lesions. At the end of one week, the injections were discontinued for a week, at the end of which time the Wassermann test had become negative. The treatment was then resumed in 1½ grain doses daily for one week longer, after which the man received three injections weekly for several weeks more. No internal treatment medication was given until the reaction became negative when the tonic doses of iron and strychnia were administered. No bad effects from the arsenic treatment were observed. The author hopes to report future progress of the case.

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Potassium Permanganate as a Hemostatic.—L. Buckle, New York (Journal A. M. A., April 29), reports a case of excessive hemorrage in a Jewish child after the rite of circumcision had been performed on the eighth day after birth, in which the ordinary treatment with styptics failed to control the bleeding. The child became so pale and weak from the loss of blood that its parents took it from the hospital to die at home. Having in a former experience observed the good effects of potassium permanganate in powder when applied to persistent capillary oozing from small cuts, Buckle ventured to use it in this case with the result of immediate checking of the bleeding and no recurrence. The action so promptly of the potassium permanganate was a surprise to him, and, while not enthusiastically recommending it for such cases, thinks the success in this case merits its publication. The child was not a hemophiliac for a deep cut in the forehead caused by a fall, three months later, gave no trouble at all and healed well.

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"606" in a Case of Paralytic Dementia.—Dr. Ehlers injected the drug according to the Weshcelmann technic. The patient was a man of 40, with paralytic dementia, which had considerably improved under psychiatric treatment, so that he was able to walk and read the papers and understand part of what he read. He had had two apoplectiform attacks previously, one two years and one five weeks before the injection of "606." The injection was not

followed by any local reaction, but progressive symptoms on the part of the nervous system developed, tremor, sweating crises and weakness, and the patient died on the fifth day of progressive heart weakness. No cause for the fatality could be discovered at necropsy except acute parenchymatous degeneration of the organs.—New Jersey Medical Journal.

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Hematoma of the Adrenal Body.—This unusual case is reported by Case (Proc. Path. Soc., Philadelphia, December, 1910, p. 258), in a negress, aged 63, who was admitted to the Philadelphia General Hospital Dec. 29th, 1909, and died Jan. 8, 1910. She suffered, while in the hospital, with mitral regurgitation, aphasia, paralysis of the left arm and incontinence of urine and feces. The most interesting finding at autopsy was the left adrenal which was about the size of a goose egg. It was dark red in color, with here and there patches of yellow, much divided and separated cortex, showing beneath the capsule. This enlargement involved approximately two-thirds of the organ, and was due to a comparatively old hemorrhage into the medulla, with here and there areas of fresh bloodclot. In addition, the microscope revealed a moderate proliferation of connective tissue about the clot, with thickening of the capsule. The kidney was arteriosclerotic and the aorta atheromatous.

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Danger of Prolonged Use of Quinine.—In an excerpt from the Archiv für Hygiene, cited in the Edinburgh Medical Journal, Graziani reports some investigations made by him regarding the possible danger of continuous administration of small quantities of quinine as a prophylactic against malaria. He administered quinine hydrochloride to rabbits and guinea pigs in doses proportional to that used for man in the prophylaxis of malaria. As a result he found that the growth of quinized animals was distinctly impaired as compared with control animals receiving only injections of physiological salt solution. Apart from this interference in growth quinine had apparently little action. It appears from Graziani's experiments that any prolonged use of quinine is by no means an innocuous proceeding, as it may prevent the growth of young animals, and subsequently lower their power of producing immune bodies and of resisting microbic infection.—New York Medical Journal.

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In sprains of the shoulder passive movements are to be resorted to as soon as the swelling and bruising of the parts begins to subside. To postpone these manipulations for more than a few days

is to encourage the formation of adhesions, with resulting stiffness —International Journal Surgery.

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Poliomyelitis.—J. McW. Berry, Albany, N. Y., (Journal A. M. A., April 8), discusses the methods of treatment of the paralysis following acute poliomyelitis. The electric treatment by the galvanic current is of much more value than that by the faradic, and is of value chiefly in the preservation of the nutrition of the paralyzed muscles until the return of voluntary control. It is useful, therefore, only in the early stages and not after the paralysis has become stationary. The brace treatment is useful in preventing deformity and preventing outstretching of muscles, but mild cases may do better without it and the weight and pressure of the apparatus is damaging in severe ones. In some cases, however, it is essential. Braces should be strong but light and simple as possible. In case of foot-drop a stiff ankled shoe or a brace going up as far as the knee on one side of the leg is enough. In paralysis of the leg, the brace should not be extended to go around the waist unless absolutely necessary, and motion should always be allowed at joints if possible. The operative treatment of paralysis consists in the correction of deformity, tendon or nerve grafting and ankylosing operations; and all of these are sometimes useful. Massage and muscle training are two distinct procedures in treatment but they go well together, the latter supplementing the former. In the earlier stages of the paralysis massage has the advantages of the electrical treatment without its disadvantages and in the late stages of paralysis it is of great value as a preliminary to muscle training. In using it, however, one must remember that the muscles are weak and sensitive and too vigorous massage may be injurious. When the motor cells supplying the muscles are not destroyed but only injured, muscle training comes into play and is the most valuable method. It should not be started as early as massage and only after the acute symptoms have subsided and the muscles have lost their irritability. Too much should not be attempted at first and great care should be taken not to overtire the weakened muscles, and in young children it should be given in the form of play. There is a great temptation to get the patient into braces and to walking too soon. Creeping exercises for a child are useful before actual walking is allowed. The brace treatment should always be supplemented by muscle training which should be employed with the idea of ultimately giving up the brace.